Plate VII., fig. 2, shows the workman on the left in the act of finally smoothing off a mounted tuhla, and the figure on the right is waiting for a tool, visible in the fire, between the two figures, to soften enough to put it through another stage. He is holding in his hand a koondi on which he afterwards mounted pirries. Between his knees will be noticed a coolkie or hammer stone, and opposite his right knee can be seen the ball of gum. A wadna or digging stick is visible between the two figures towards the back ground, and a ball made of the fibres of the sand hill broom bush. The man on left has a pirrha (bowl) between his legs.

Plate VIII., fig. 1, shows a close up of mounted tuhlas, side view.

Plate VIII., fig. 2, shows the same tuhlas, back view.

Plate IX., fig. 1, shows side views of mounted pirries. The one on the right was mounted with beefwood gum. I picked this up in a deserted hut on the Diamentina River in 1913. The tool on the other end of the koondi was a piece of steel bound on with emu sinew.

Plate IX., fig. 2, shows front views of the same pirries.

MAGIC STONES OF THE TRIBES EAST AND NORTH-EAST OF LAKE EYRE.

By

George Aiston, Maree, South Australia.

(Communicated by R. W. Legge.)

Plate X.

(Read 12th August, 1929.)

Any stone that was unusual was picked up by the tribesman and sooner or later was endowed with magical qualities. Probably when first brought in, no notice would be taken of it, but some chance would perhaps ensure a plentiful supply of food soon after the stone was found, and a conference of old men would be called to try and ascertain why it was that this supply became available.

To the native there was no effect without a cause, and it would be only a little while before some one remembered the strange stone that had been found. No one could give any reason for the strange stone, and no one could account for the unexpected supply of food; therefore the two unexplained things must have some relation to each other, and the stone became a magic stone.

I have not the slightest doubt that the use of clear gypsum as rain stone and the many attempts to dissolve it into water are caused by the fact that at some remote time a piece of clear ice was found, left over from the very infrequent frosts that occur in this country. A rain probably followed the finding of the piece of ice, possibly while the natives were handling it. There were the two things unexplained, the hard water, or clear stone to the native mind, and the unexpected rain. A rain is nearly always accompanied by a rise in temperature in this country, so the ice would be melted before the rain stopped, therefore to the native mind the clear stone that melted must be responsible for the rain, and ice being hard to obtain and clear gypsum plentiful they have ever since been trying to dissolve it and make rain.

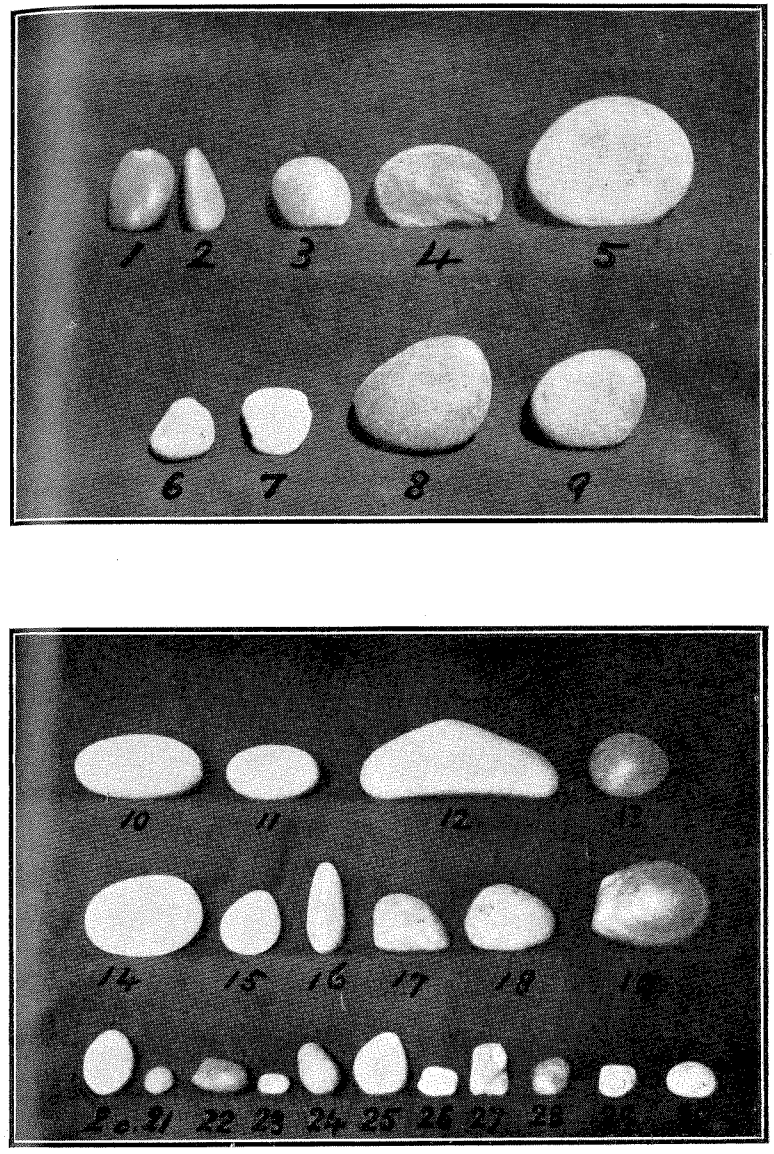
One of the accompanying photographs was taken many years ago, and several of the stones have passed from my possession.

Plate X., figs. 1 and 3, represents the seed of the yowa (*Cyperus* or onion grass), a plant with a bulbous root that grows very quickly after a rain. The bulbs are a favourite food, and are eagerly sought after.

Directly it starts to rain the whole tribe go out to a likely sandy place and broadcast these stones over as much ground as they can cover. There is no necessity to plant them thickly, one every twenty square yards or so will ensure a plentiful supply. After the yowas are grown the stones will be collected and returned to the pillies (string bags) to serve another turn.

Nos. 2 and 16 are known as Mooras yakhurra, or Mooras' teeth. The Yaurorka have a tradition that a big lizard caught and ate one of their number while he was swimming in the Cooper. They caught the lizard at near Lake Hope, and after knocking out all of his teeth they let him go. The teeth were buried at Lake Hope (pando), and in the course of time a legend grew up that any one who could get one of these teeth was safe from the cuddimukra (legendary beasts that live in the deep waters).

The original teeth having been used up some one found a smooth, pointed stone, not unlike a crocodile's tooth. This was tried by some one who had to cross the water. Having got across safely he gave the credit to the stone, and any stones near this shape were deemed magical. They are very rare, most of the country being covered with red sandstone gibbers, so possibly those few that are discovered have been brought here. There is no doubt that they were treasured; the one numbered 16 has a high glassy polish on it that must have taken hundreds of years of carrying to attain. No. 4 is a charm for ensuring success in the search for coories or fresh-water mussels. It was given to me some years ago by an old blackfellow who assured me that it was a coorie that the Mooras had turned to stone. It looks more like a petrified bean seed, but I think it has only acquired its shape by sand attrition. The old fellow who gave it to me, Tarkarawikarie, assured me that if I took it with me on the trip to the Cooper on which I was going at the time, the mussels would come out of the mud for me if I held it near the mud banks.



Magic Stones from Lake Eyre Region.

Nos. 5, 8, and 9 are mullaricardi, or pounding stones used in the ceremony of planting wirrha bush seeds.

The wirrha (*Acacia salicina*) is used to provide the ash to mix with the pitchuri or native tobacco. The fresh young green leaves make a better ash than the older drought-dried leaves. When the trees were getting dry the old men formed in a ring in some likely place in the sandhills and placed a few round white quartz pebbles on the sand. They then took one or two genuine seeds, each, of the wirrha tree, and pounded them up between the mullaricardi, the pounding beat time to the song of

Charrila charrila Koppara Charrilla, charrilla koppara Nunta
plant plant root plant plant root grow

Dr. Horne, *Savage Life in Central Australia*, transposed these words and made Charrilla to mean root and koppara to mean plant. The famous bartering place for the tribes, Kopperamanna to the white people, and koppara murra to the natives, gets its name from root hand (as all of the fingers lead to the root of the hand, so all tribes gather at koppara murra).

The white quartz pebbles were left on the sandhill, and very shortly afterwards a fresh lot of wirrha would grow. The pebbles would then be picked up and put back into the pillies for use at another time.

Nos. 6 and 7 were the pebbles used in the above ceremony. There is no white quartz in this country, so these stones must have been brought up from near Marree, they are very plentiful there.

Nos. 10 and 11, 13, 14, 17, 18 were stones that were sucked out of various people by the medicine men (koonkis); 10 and 11 have been made, the signs of the grinding to the very symmetrical shape being very visible; 13 is just a brown pebble, worn smooth and polished with long carrying; 17 is very like a petrified cockle in appearance—it was given me by a medicine man who claimed that he had sucked it out of the hip joint of a woman who was suffering from rheumatism. Whatever else he did to the woman, he got her on her feet again, and she is still alive; he treated her about five years ago, at a time when every one, myself included, expected her to die.

No. 18 is just an ordinary pebble, as always worn smooth with carrying.

No. 12 has something to do with the Kirra maker murdu or totem, but I cannot quite grasp what relation it has to the Moora. It is not the emblem of the Mooras. There were two of them. Their emblem was a slender cylindro-conical stone each, but this stone, so the blacks tell me, is "cousin belong Kirramurakoo. Himshow which Moora "them two stones belong."

The two women who were the ancestors of the Kirra maker murdu became Mooras because they killed another Moora who was notorious for his molestation of women. He worried the two women, and they got rid of him somehow, then went back to their camp, where they made a boomerang (kirra) each, and when the Moora annoyed them again they killed him with the kirras they made.

The stone is five inches long by about 2 inches wide at its widest part, and was found about eighteen miles west of this place.

The present holder of the Kirra maker Moora stones was very anxious to get this, as he says it completes his Moora, this part having been lost in his grandfather's time.

No. 15 represents some seed unknown.

No. 19 ensures to the possessor a plentiful supply of eggs. I found it among the bones of a skeleton of a man who had been shot at Neaylons Swamp, near Mungeranie. Directly I picked it up I showed it to a blackfellow who was with me. He very promptly pocketed it, and I had to struggle with him to get it back. He was very sulky with me for a couple of days, but finally brought a deputation of old men over to me to try and persuade me to hand it over to him, but the old men advised me to keep it myself. They assured me that I would always have a plentiful supply of eggs as long as I kept it, but, somehow, it does not work for me.

Nos. 20 to 30 represent various seed stones. Most of the white pebbles are wirrha bush seeds, but the use of the darker ones is unknown. Their highly polished appearance, and the fact that they are foreign to the country, is all that makes them magical.

THE BIOLOGICAL CONTROL OF NOXIOUS WEEDS.

By

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(Read 14th October, 1929.)

Plates XI.-XVIII., and One Text Figure.

In the rush and hurry of this present age, in which the speed of the world's evolution is greater than ever before, few opportunities are given to the ordinary man to pause and look backward, if only for a few moments, so that a little piece of the past may be viewed, and thereby a truer perspective of the present gained. To-night we are gathered together in this hall to do honour to a great pioneer of biology in Tasmania; and you have done me the very great honour of asking me to deliver this, the third R. M. Johnston Memorial Lecture, in memory of that pioneer. My predecessor in this lecture, Professor Wood Jones, whom, I am sure, we are all delighted to welcome back once more to Australia, said that the best way to honour the memory of this great man was to give of one's best in return. This I shall endeavour to do to-night.

Looking back to the time when R. M. Johnston lived and worked, I think the most striking thing was the immense field of research covered by the biologists of that time. A man could, if he chose, take the whole of Biology as his subject, and do original work in many diverse groups. There were even professors at some well-known Universities, who taught their students the three subjects of zoology, botany, and geology, and taught them well, too. Nowadays the various branches of science have enlarged their boundaries to such an extent that this wide field is no longer possible for any single human mind. As the boundaries of our knowledge extend, as the blank wall of ignorance is pushed farther and farther back, the conquered territory spreads out before us in every